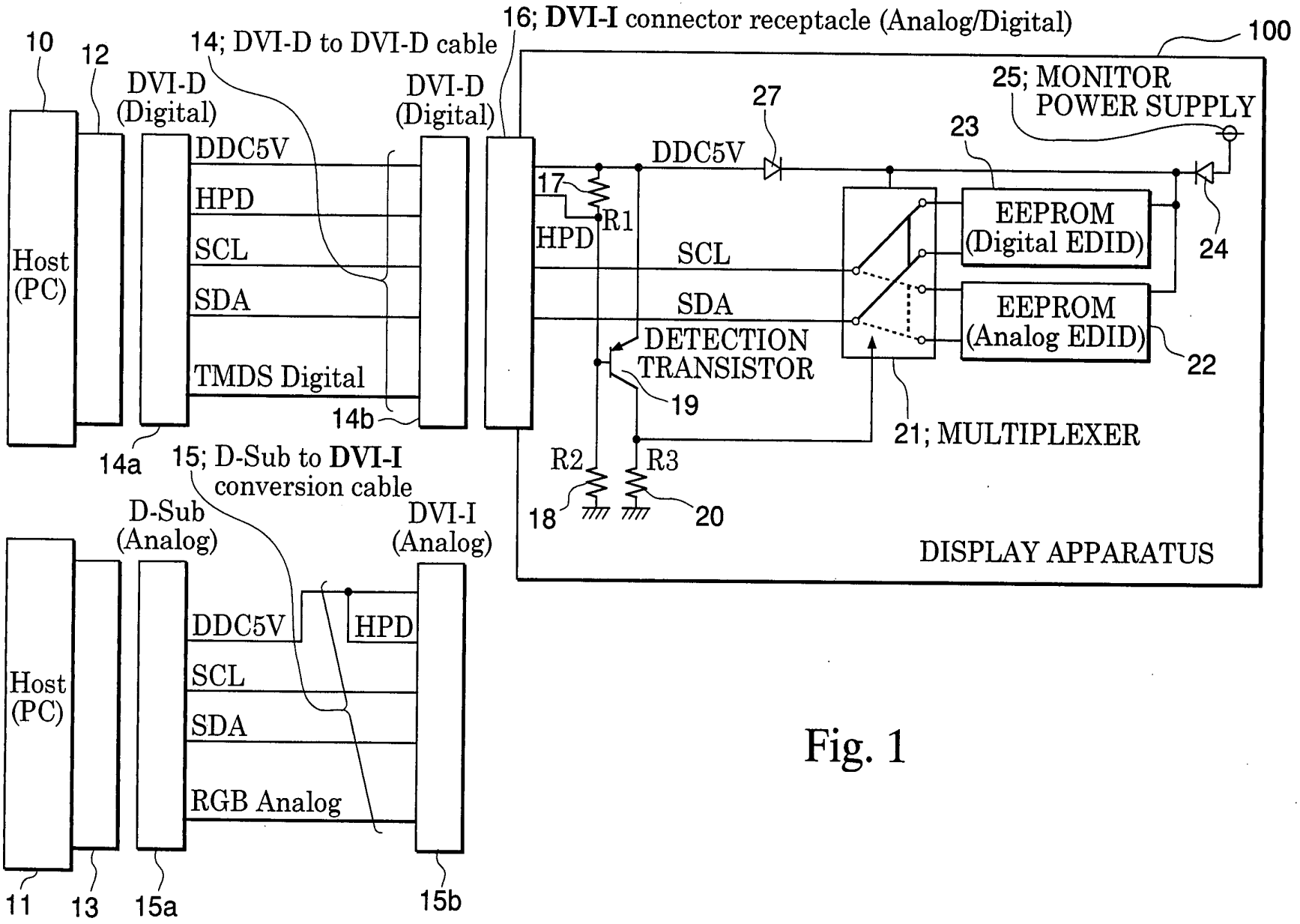

10
12
14; DVI-D to DVI-D cable
16; DVI-I connector receptacle (Analog/Digital)
100
DVI-D
(Digital)
DVI-D
(Digital)
25; MONITOR
POWER SUPPLY
27
23
DDC5V
DDC5V
HPD
SCL
SDA
TMDS Digital
17
R1
HPD
SCL
SDA
EEPROM
(Digital EDID)
24
EEPROM
(Analog EDID)
22
Host
(PC)
DETECTION
TRANSISTOR
19
21; MULTIPLEXER
14b
14a
15; D-Sub to DVI-I
conversion cable
R2
R3
18
20
D-Sub
(Analog)
DVI-I
(Analog)
DISPLAY APPARATUS
DDC5V
HPD
SCL
SDA
RGB Analog
Host
(PC)
11
13
15a
15b

Fig. 1

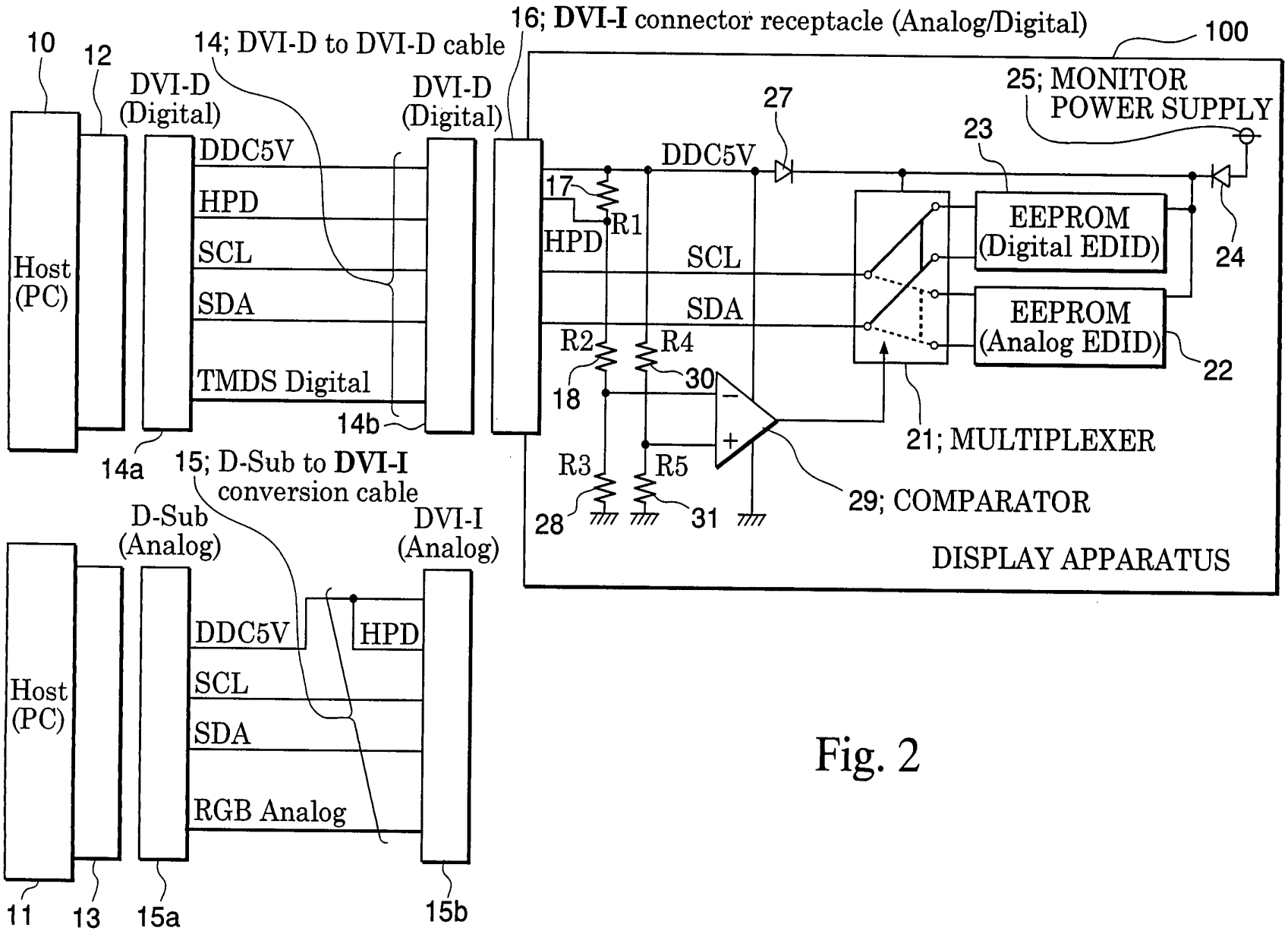

10
12
14; DVI-D to DVI-D cable
16; DVI-I connector receptacle (Analog/Digital)
100
DVI-D
(Digital)
DVI-D
(Digital)
25; MONITOR
POWER SUPPLY
27
23
DDC5V
DDC5V
17
R1
HPD
HPD
SCL
SCL
SDA
SDA
EEPROM
(Digital EDID)
24
EEPROM
(Analog EDID)
22
Host
(PC)
TMDS Digital
14b
R2
R4
30
18
14a
15; D-Sub to DVI-I
conversion cable
21; MULTIPLEXER
R3
R5
29; COMPARATOR
28
31
D-Sub
(Analog)
DVI-I
(Analog)
DISPLAY APPARATUS
DDC5V
HPD
SCL
SDA
RGB Analog
Host
(PC)
11
13
15a
15b

Fig. 2

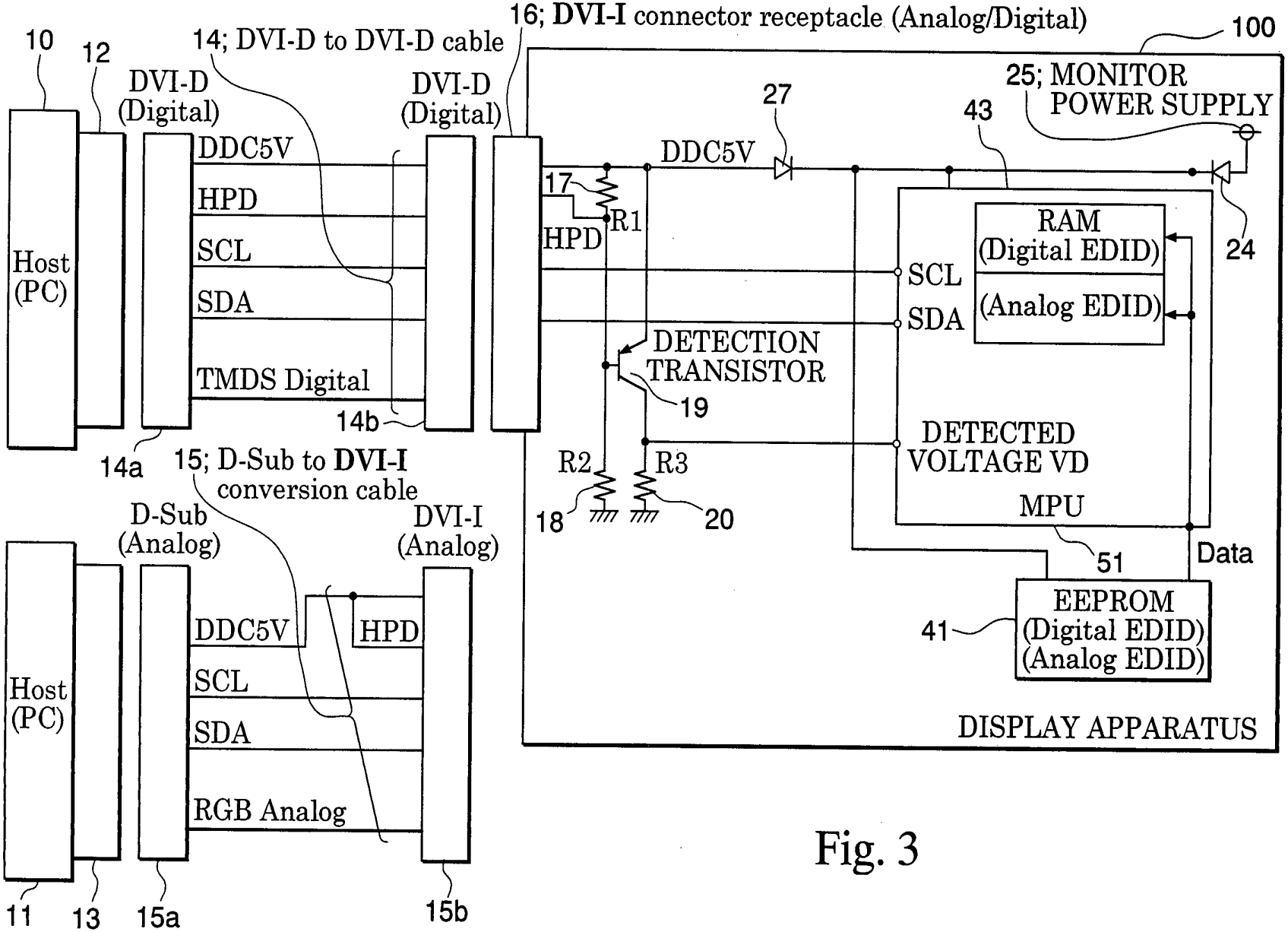

10
12
14; DVI-D to DVI-D cable
16; DVI-I connector receptacle (Analog/Digital)
100
DVI-D
(Digital)
DVI-D
(Digital)
25; MONITOR
POWER SUPPLY
27
43
DDC5V
HPD
SCL
SDA
TMDS Digital
17
R1
HPD
DDC5V
RAM
(Digital EDID)
(Analog EDID)
24
SCL
SDA
Host
(PC)
DETECTION
TRANSISTOR
19
14b
14a
15; D-Sub to DVI-I
conversion cable
R2
R3
DETECTED
VOLTAGE VD
18
20
MPU
D-Sub
(Analog)
DVI-I
(Analog)
51
Data
DDC5V
HPD
EEPROM
(Digital EDID)
(Analog EDID)
41
SCL
SDA
Host
(PC)
RGB Analog
DISPLAY APPARATUS
11
13
15a
15b

Fig. 3

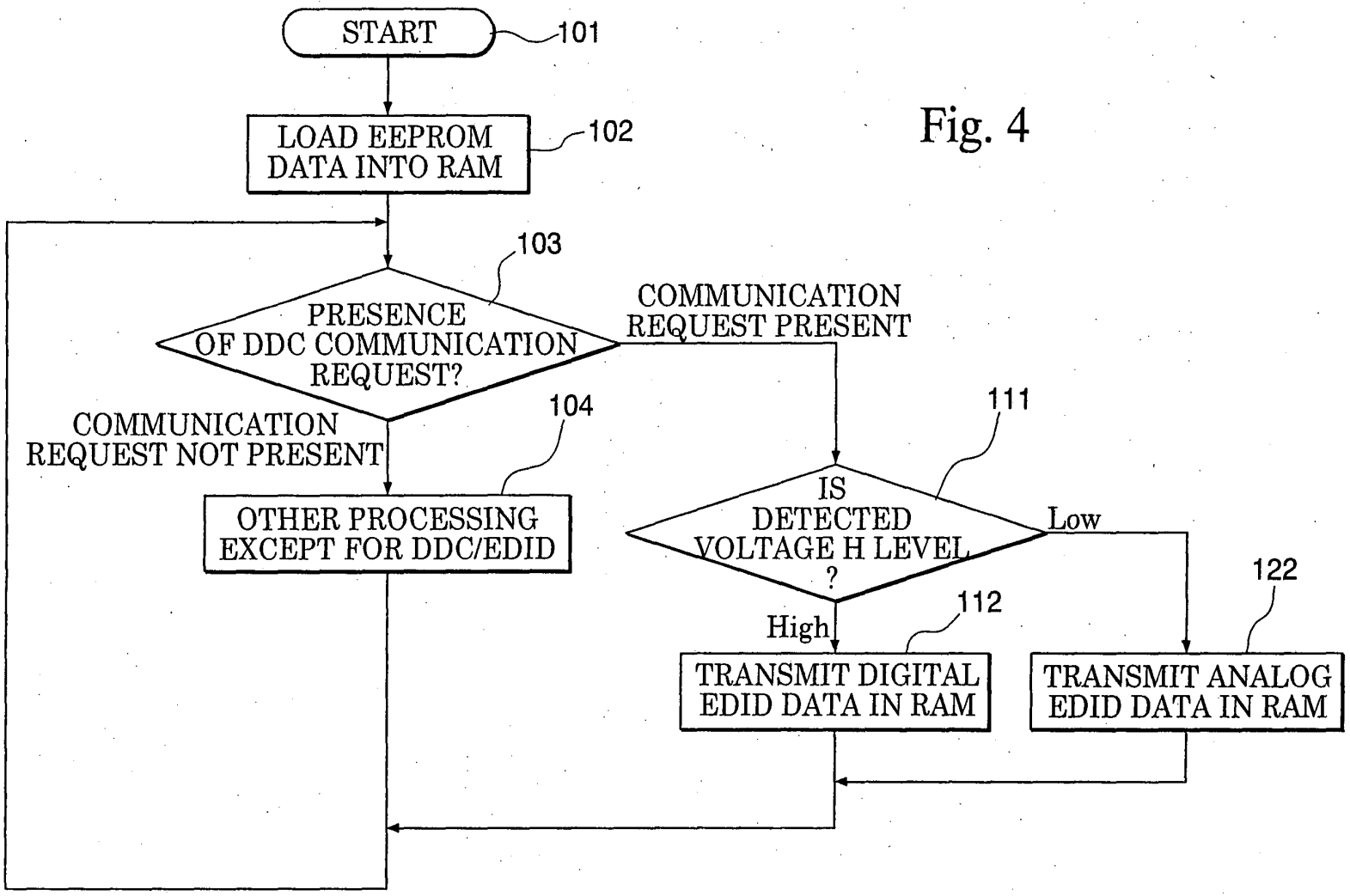
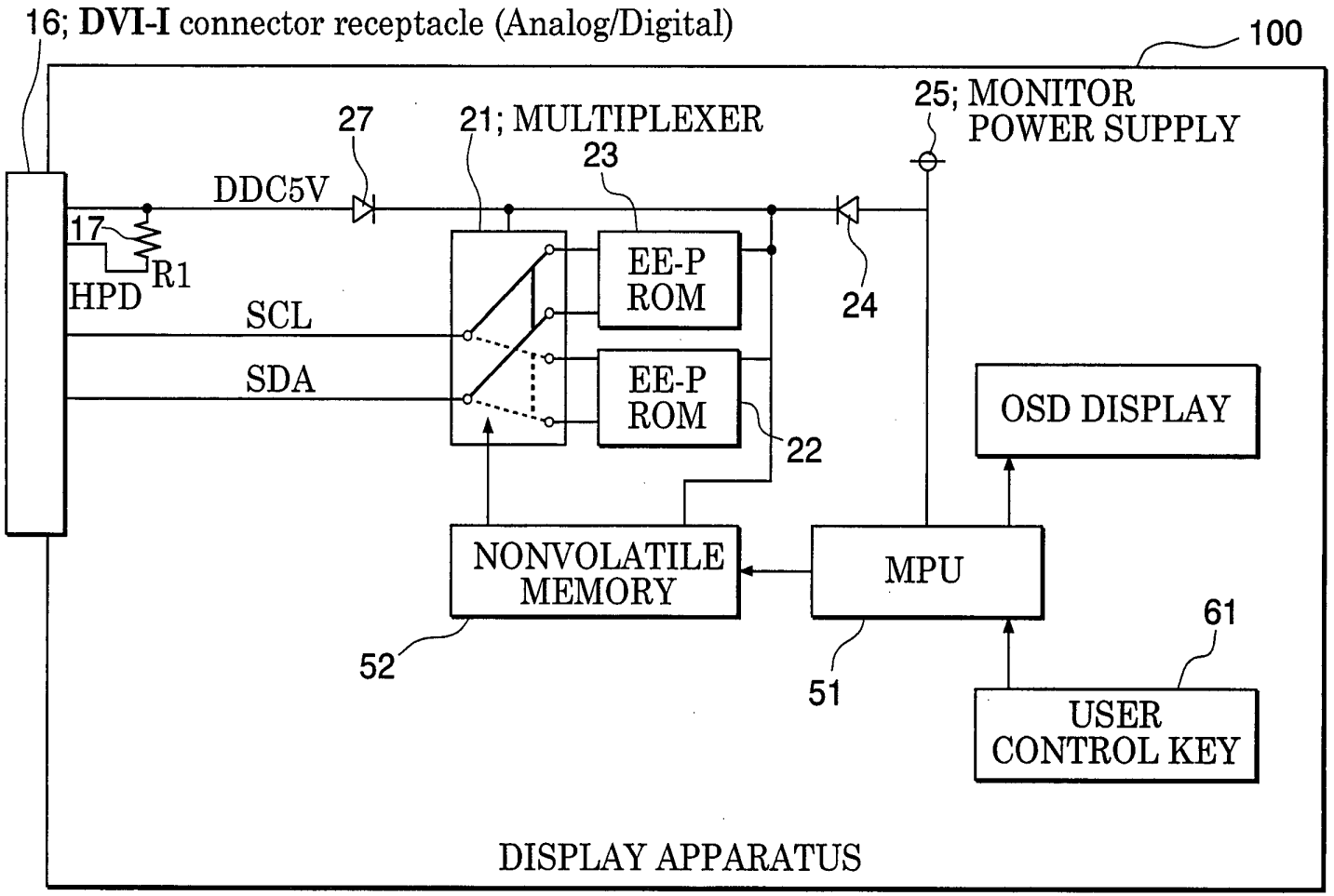

START
101
LOAD EEPROM DATA INTO RAM
102
103
PRESENCE OF DDC COMMUNICATION REQUEST?
COMMUNICATION REQUEST PRESENT
COMMUNICATION REQUEST NOT PRESENT
104
OTHER PROCESSING EXCEPT FOR DDC/EDID
111
IS DETECTED VOLTAGE H LEVEL ?
Low
High
112
122
TRANSMIT DIGITAL EDID DATA IN RAM
TRANSMIT ANALOG EDID DATA IN RAM

Fig. 4

Fig. 5


16; DVI-I connector receptacle (Analog/Digital)
100
25; MONITOR POWER SUPPLY
27
21; MULTIPLEXER
23
DDC5V
17
R1
HPD
SCL
SDA
EE-P ROM
EE-P ROM
24
22
OSD DISPLAY
NONVOLATILE MEMORY
MPU
52
51
61
USER CONTROL KEY
DISPLAY APPARATUS

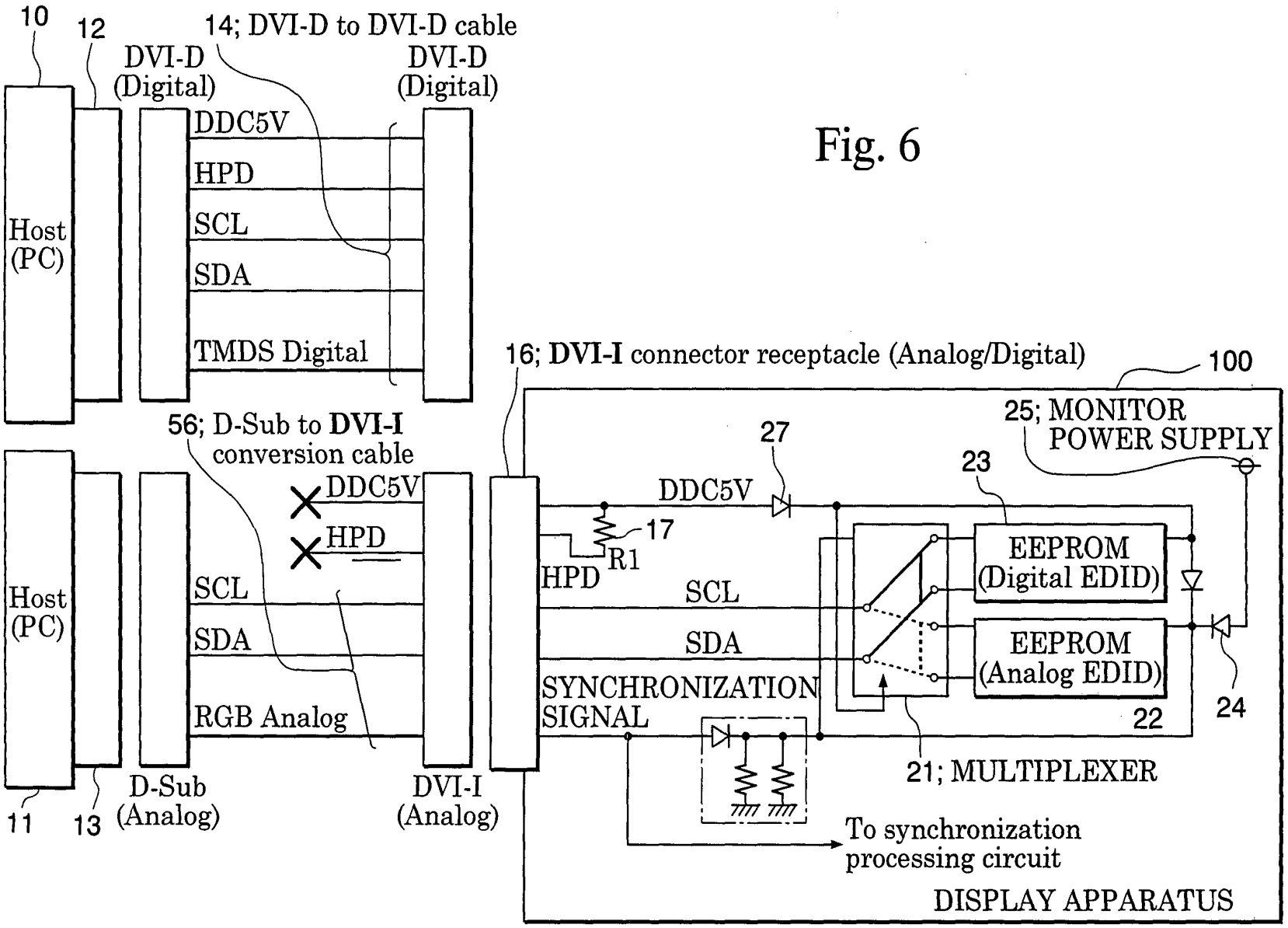

10
12
14; DVI-D to DVI-D cable
DVI-D
(Digital)
DVI-D
(Digital)
DDC5V
HPD
SCL
SDA
TMDS Digital
Host
(PC)
16; DVI-I connector receptacle (Analog/Digital)
100
25; MONITOR
POWER SUPPLY
27
23
56; D-Sub to DVI-I
conversion cable
DDC5V
HPD
SCL
SDA
RGB Analog
Host
(PC)
DDC5V
17
R1
HPD
SCL
SDA
SYNCHRONIZATION
SIGNAL
EEPROM
(Digital EDID)
EEPROM
(Analog EDID)
22
24
21; MULTIPLEXER
To synchronization
processing circuit
DISPLAY APPARATUS
11
13
D-Sub
(Analog)
DVI-I
(Analog)

Fig. 6